Available Goddard Space Flight Center Services

Goddard Space Flight Center (GSFC) services are divided into two categories as described in the following paragraphs. These services are available to investigators beginning with selection for their Phase A concept study. Note that these services are not considered GFE as defined in section 3.3.1 of the SMEX AO.

The first category of services is for those investigators who prefer to focus on their science investigation and instrumentation and desire to have GSFC utilize existing infrastructure to support the formulation and implementation the mission. For these investigators, GSFC will provide whatever information may be needed to complete the Phase A concept study, and to support any presentations or other activities necessary to satisfy the requirements of the AO process.

The second category of services described, are services that address specific elements of a mission such as the acquisition of a spacecraft bus, access to space, or integrated mission and/or instrument design. This category assumes that the investigator has an infrastructure and approach to address the investigation and simply seeks to address specific concerns.

For this second category of services, the Goddard Space Flight Center has developed several resources and facilities to provide mission development products and services to the science and engineering communities. These facilities and resources are elements leading to the rapid formulation and execution of missions, and are key elements of NASA's Intelligent Synthesis Environment (ISE) initiative. ISE is a new NASA Initiative devoted to establishing a rapid and distributed systems design and execution environment for NASA and its partners. The intent in this category of services is to provide investigators access to GSFC expertise and resources through elements of this emerging NASA environment.

As required by the AO, cost for these services will be applied on a full cost basis.

1.0 Investigators Focusing on the Science Investigation and Instrumentation

For Investigators selected for Phase A concept study and who prefer this mode of operation for the development of their investigation, GSFC is

prepared to provide the expertise necessary to support them. This includes mission systems management and integration, end to end systems engineering, spacecraft and ground system acquisition, access to space and other support needed to complete the formulation, and implementation of the investigation.

To obtain these services investigators should contact Ms. Kris Brown of the Systems Technology and Advanced Concepts Directorate. Ms Brown will serve as the point of contact and coordinator for GSFC provided services. In this role Ms. Brown will interact with investigators to understand the needs, scope the effort, develop action plans, and make arrangements to satisfy them. Information to contact Ms. Brown is provided below.

Permanent Address	Goddard Space Flight Center Mailstop 730.0 Building 23 Room W451 Greenbelt, MD 20771
Permanent email address:	Kristi.S.Brown.1@gsfc.nasa.gov
Business phone:	301 286-6406
Fax number:	301 286-1766

2.0 Investigators Desiring Specific Services

Investigators who desire discrete services are encouraged to explore their needs via GSFC's existing rapid execution and formulation elements; the Integrated Mission Design Center, the Instrument Synthesis and Analysis Laboratory, Access To Space Office and the Rapid Spacecraft Development Office. These resources are described in the subsequent sections.

Investigators seeking additional guidance (from an end to end mission perspective) on how to optimize and coordinate the use of these resources are encouraged to contact Ms. Kris Brown. Ms Brown is the Lead for GSFC's ISE Program Office and the point of contact and coordinator for GSFC provided services.

2.1 Rapid Spacecraft Development Office (RSDO)

The Rapid Spacecraft Development Office (RSDO), through the Rapid Spacecraft Acquisition and Rapid II contracts, has access to previously built

satellite busses from most spacecraft manufacturers. RSDO can also arrange instrument accommodations as a secondary payload through the QuickRide program. RSDO contracts are available for use by all investigators responding to NASA AO's without charge.

RSDO can work with investigators responding to the SMEX AO process by assisting them in evaluating the availability of heritage spacecraft from industry to support their missions unique requirements. Should the investigator's proposal be selected for Phase A concept study RSDO can assist the investigator in selecting an industry partner to provide the spacecraft for the formulation and subsequent implementation of the mission. . *(Note that although a commercial launch vehicle opportunity may be offered through RSDO the option will not be available for this SMEX AO)*

After selection for flight, RSDO transfers management of the spacecraft contract to the investigator (if civil servant) or to the Explorers Program Office (for non-civil Service).

To obtain RSDO services, investigators should contact Mr. Scott Greatorex of the RSDO. RSDO will interact with investigators to understand their needs, develop acquisition strategies, and make arrangements to satisfy them. Information to contact RSDO is provided below.

Permanent Address	Goddard Space Flight Center Mailstop 456 Building 16W Room N115 Greenbelt, MD 20771
Web Page	http://rsdo.gsfc.nasa.gov
Permanent email address:	scott.a.greatorex.1@gsfc.nasa.gov
Business phone:	301 286-6354
Fax number:	301 286-0530

2.2 Access to Space (ATS)

The Goddard Space Flight Center's Access to Space (ATS) Group supports the development and implementation of mission concepts by identifying potential opportunities for cost effective access to space.

Through partnerships established with global access providers, the ATS Group has created an access to space "portal" located at:

http://accesstospace.gsfc.nasa.gov

This interactive web site provides up-to-date information on access to space opportunities, technology development efforts within NASA, and details regarding the various "access modes" available.

The ATS opportunity database is divided into three categories:

- Funded and manifested missions, including availability of excess volume/performance
- Proposed missions that have funding for launch, but not enough to cover the entire cost of the vehicle they are manifested on
- Future concepts that do not have funding for launch but are looking for potential partners and/or launch opportunities.

This information is available, free of charge, to any investigator with Internet access.

The "access mode" information within the ATS site is essentially an abbreviated User's Guide for the various reusable and expendable launch vehicles, sounding rockets, Shuttle, and balloons available. This information is fully searchable and can be compared side by side by opening multiple browser windows. This information is also available free of charge, to any investigator with Internet access. Where this information may appear to be in conflict with other documents in the Explorer program library (EPL) the EPL document takes precedence for the purpose of this AO.

In addition to the information provided on its web site, members of the ATS Group can provide consulting services at a nominal cost, which consist of the following:

- "Quick look" summary access mode/opportunity assessments
- Comprehensive access mode/opportunity assessment packages
- Facilitating/coordinating linkage of Investigators with suppliers

The ATS Group works closely with its various partners such as The Expendable Launch Vehicles Office at the Kennedy Space Center and the

USAF's Space Test Program in conducting all of these efforts to ensure as comprehensive and up-to-date products as possible.

To obtain ATS consulting services, investigators should contact Mr. William Cutlip of the ATS Group. The ATS Group will interact with investigators to fully understand the scope of their needs.

Permanent Address:	Goddard Space Flight Center Mailstop 740.2 Building 12, room N233 Greenbelt, MD 20771
Permanent Email address:	william.e.cutlip.1@gsfc.nasa.gov
Business phone:	(301) 286-0438
Fax number:	(301) 286-0232

2.3 Integrated Mission Design Center

The NASA Integrated Mission Design Center (IMDC), located at the Goddard Space Flight Center (GSFC), provides specific mission engineering analysis and provides end-to-end mission design products. IMDC capabilities include:

- Full end-to-end mission studies including system/subsystem concepts, requirements and trades
- Focused studies
- Independent assessments of Investigator-provided studies/concepts
- New technologies and risk assessments

IMDC mission design sessions are typically one full week and are tailored to fit an investigator's specific mission requirements. The IMDC will provide support ranging from one day brainstorming sessions to an extended design session, as required. IMDC personnel will work with the Investigator Team prior to the mission design session to understand the mission goals and objectives, the science driving requirements, the instrumentation and mission configuration and architecture, and the goals of the IMDC session. The Investigator is a key member of the IMDC process and during the study period is the integral decision-making member in the IMDC. This partnership engages the Investigator in the design process and provides him/her the opportunity to influence and refine the mission study objectives throughout the design process.

This enables the IMDC to make the best decisions in real time and has been proven to result in the best product to meet the Investigator's needs.

To obtain more information regarding the use of the IMDC, Investigators should contact Ms. Ellen Herring, IMDC Operations Manager. Initial IMDC interaction with Investigators will result in the understanding of Investigators' needs, the development of strategies to meet these needs, and the scheduling of follow-up IMDC activities as deemed necessary. Information to contact the IMDC is provided below.

Permanent Address	NASA/Goddard Space Flight Center IMDC, Code 743 Building 23, Room N311 Greenbelt, MD 20771-0001
WEB Page	http://imdc.nasa.gov/
Permanent email address	imdc@gsfc.nasa.gov (facility) Ellen.herring@gsfc.nasa.gov (Operations Manager)
Business phone	1-301-286-0063 (facility) 1-301-286-7393 (Operations Manager)
FAX number	1-301-286-0343 (facility)

2.4 Instrument Synthesis and Analysis Laboratory (ISAL)

The Instrument Synthesis and Analysis Laboratory (ISAL) is a new NASA/GSFC resource dedicated to providing instrument design and analysis services to investigators and instrument teams. The ISAL provides instrument design services through the talents of resident engineering and analytical experts in instrument systems, structural/mechanical, thermal, optical, electrical and detectors. Like its sister facility the IMDC, the ISAL is available to instrument teams and investigators to perform tailored services from discrete analytical/design tasks to full instrument designs. The ISAL has the capability to provide an instrument design within a period of several weeks, or is available to provide expertise in a number of areas.

For more information on the ISAL please contact William Hayden, the ISAL Manager/Team Leader:

Permanent Address:	Goddard Space Flight Center Mailstop 730.0 Building 23, room W324 Greenbelt, MD 20771
Web page (online 10/15/99):	http://isal.gsfc.nasa.gov
Permanent Email address:	william.hayden@gsfc.nasa.gov
Business phone:	(301) 286-5127
Fax number:	(301) 286-6063